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# The Evaluation of the National Long Term Care Demonstration

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## 10. Overview of the Findings

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*The channeling demonstration sought to substitute community care for nursing home care through comprehensive case management and expanded community services. The channeling intervention was implemented largely according to design. Although the population served was, as intended, extremely frail, it turned out not to be at high risk of nursing home placement. The costs of the additional case management and community services—provided in most cases to clients who would not have entered nursing homes even without channeling—were not offset by reductions in the cost of nursing home use. Hence, total costs increased. The expanded formal community care did not, however, result in a substantial reduction in informal caregiving. Moreover, channeling benefited clients, and the family and friends who cared for them, in several ways: increased services, reduced unmet needs, increased confidence in receipt of care and satisfaction with arrangements for it, and increased satisfaction with life. Expansion of case management and community services beyond what already exists, then, must be justified on the basis not of cost savings but of benefits to clients and their caregivers.*

This issue of *Health Services Research* has presented the demonstration results based on the final report of the channeling evaluation and its 18 detailed technical reports (see References list). Here we summarize the basic findings of the evaluation and their generalizability.

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## SUMMARY OF THE FINDINGS

*Channeling served a very frail population, but the population turned out not to be at high risk of nursing home placement.* Consistent with the eligibility criteria, clients reported major limitations in functioning: over 22 percent were unable to perform any of five activities of daily living (ADL) (eating, transfer, toileting, dressing, bathing); 53 percent were incontinent; and 81 percent were restricted in their mobility. There was also overwhelming dependence in instrumental activities of daily living (IADL), for example, in meal preparation (88 percent), shopping (96 percent), and housekeeping (97 percent). Mental functioning was also limited; channeling sample members missed, on average, three to four items of a ten-item mental status scale.

Needs following acute care episodes may have precipitated many clients' application to channeling. Over 70 percent reported experiencing the onset or worsening of a serious health condition in the year prior to channeling, and almost half had been hospitalized in the two months before application to channeling. About three-fifths already were receiving some in-home care.

Despite their frailty, channeling sample members' risk of nursing home placement was much lower than envisioned at the start. After one year, 13-14 percent of surviving control group members were in a nursing home. Even by 18 months, only 19 percent were in a nursing home. Sample members were, however, at high risk of hospitalization (37 percent of the control group were admitted to a hospital during months 7-12). And they were at high risk of dying (by 12 months, 27-30 percent of the control group had died).

*The program elements were implemented largely as designed.* A structured needs assessment served both the important clinical function of providing information for care planning and the important research function of providing baseline data for the evaluation. Assessments were completed on all clients. Then a formalized care plan, which included both informal and formal services, was completed for each client and reviewed by a supervisor.

Ongoing case management, including regular monitoring and formalized reassessment and care plan adjustment, was implemented successfully. Telephone contacts to monitor changes in clients' situations occurred in a majority of cases very frequently, in-person visits less frequently. Reassessments and care plan revisions occurred at six-month intervals for most although not all clients. (An initial requirement that the first reassessment occur at three months was relaxed,

partly because of high work loads but also partly because case managers were in frequent contact with clients during that period.)

The primary intended model difference—case managers acting as brokers between clients and service providers under the basic case management model versus expanded power to authorize payment (without regard to funding source) for a wide range of personal care and other community services under the financial control model—was also implemented according to plan. Case managers under the basic model also had a limited amount of discretionary funding to fill gaps in the existing system. Compared to the basic model, the financial model spent substantially more per client for expanded services due to its much greater ability to pay for community services.

The care plan cost limits that were part of the design of the financial model were also implemented according to plan, although care plan costs turned out to be below the limits set. Care plan costs estimated by case managers in the five financial model projects ranged from 30 to 47 percent of the cost of a nursing home in the site—well below the demonstration's average expenditure cap of 60 percent. Although the limit turned out not to be a constraint, the requirement that case managers estimate care plan costs and compare them with the limit reportedly did increase cost consciousness among case managers.

Cost sharing was also implemented as designed, with formal procedures under the financial model and with case manager discretion within broad guidelines established by each project under the basic model. Under the financial model, because the incomes of the vast majority of clients fell below the cost-sharing level (which was intentionally high) and because some services were exempt from cost sharing, only about 5 percent of clients shared in the cost of care. Case managers under both models felt that cost-sharing contributions increased both client and family interest in the care and their willingness to notify the case managers in instances of inadequate care. Indeed, a majority of financial model case managers and supervisory staff reported that a cost-sharing system should be designed to cover more clients.

Although implementation of case management was remarkably uniform, it differed between models in some ways. For example, total expenditures for staff were approximately the same for the two models, but basic model staff appear to have been able to spend a greater proportion of their time working directly with clients. This was probably due to the extra responsibilities, under the financial model, of ordering services and the associated paperwork. Taken together, the differences suggest that the basic model case managers may have pro-

vided more reassurance and personal support for clients and their informal caregivers than their counterparts under the financial model, who placed greater emphasis on the direct services that the financial model could pay for.

Implementation differed from plan in only a few respects. The time from initial screening to completion of the care plan and initiation of services was, at an average of about a month, longer than originally expected. Case manager reassessments of client needs, scheduled every six months, were, as indicated, not always done on schedule. A service audit and program review function envisioned in the design as a mechanism to monitor the quality of case management was generally not implemented and was later made optional. Finally, implementation of the gap-filling services under the basic model was delayed from 2 to 11 months because of delays in obtaining contractual authorization to expend the funds. In all, these exceptions were not central to the intervention.

*The technical evaluation design was implemented successfully.* The demonstration included a rigorous evaluation design with several components: replications of each model in five sites to limit the likelihood that the results were due to an unusual project or service environment; a randomized design to provide an accurate measure of what would have happened without channeling; samples large enough to make it unlikely that channeling effects either went undetected or were seriously overestimated; data adequate to measure the central outcomes of interest; and methodological research to identify any uncertainties in the results due to sample attrition, estimation methodology, data non-comparability, and other technical matters. In any evaluation, and certainly in one of the scale and complexity of this one, qualifications and uncertainties surrounding some results are inevitable. The extensive methodological research conducted, however, substantially reduces uncertainty due to methodological limitations.

*Channeling was tested in service environments that already provided community care.* A limited amount of case management like channeling's in its comprehensiveness was already available in the demonstration sites. Roughly 10–20 percent of the control group received such comprehensive case management, more in financial than in basic sites. Receipt of direct community services was substantial also; 60–69 percent of controls received in-home care visits in the week six months after randomization, with the proportion receiving visits and the number of visits received being greater in financial sites. Thus, the demonstration did not evaluate the effects of community care per se. Rather, it evaluated

the effects of adding comprehensive case management and expanded community services to a system that already provided a substantial amount of community care.

*Channeling did not substantially reduce nursing home use.* Channeling did not achieve its objective of substituting community care for nursing home care. Nursing home use was lower among the treatment than the control group under both models, but the difference was small—about four days per sample member during the year after enrollment—and not statistically significant. This difference was also small in relative terms; it amounted to 11–14 percent of control group use.

*Channeling increased formal community service use.* Community service use increased, not because of widespread substitution of community care for nursing home care, but because of increased use among those in the community. Personal care and homemaker services—reported by practitioners to be the most difficult types of services to obtain under the existing system—were increased the most. Community service increases under the basic model were modest: about half a visit a week more than the control group average of 2.2 visits. Increases were substantial under the financial model: over two visits a week more than the control group average of 2.8 visits. The difference between models is consistent with their different capacities to pay for community services. The basic model increased the proportion receiving services but not the average amount received by those receiving them; the financial model increased both the proportion of sample members receiving community care and the average amount of care provided to recipients.

*Neither model had a major effect on informal caregiving, although the financial model led to small reductions in some areas.* The basic model did not affect caregiving by family and friends. The financial model led to small reductions in the receipt of a few types of informal care—help with housework/laundry/shopping, help with meal preparation, delivery of prepared meals, and transportation—but not personal care, medical treatments, and other tasks. Small reductions were observed for receipt of care from informal caregivers who visited to provide care, particularly friends and neighbors—but not from spouses and children, who provided the bulk of care. And there were no significant differences in the number of visits made by informal caregivers not living with the sample member or in the hours of care provided by primary caregivers.

*Channeling did not affect longevity, hospital use, or use of physicians and other medical services.* Although mortality rates were high among the

population served, channeling had no effect on longevity. Nor was there any evidence that channeling affected hospital use, or the use of physicians or other medical services (such as outpatient services, x-rays, laboratory, and so forth).

*Channeling increased total costs.* The increased costs of case management and expanded community services were not offset by reduced nursing homes costs, so costs increased overall. The cost increases were considerably less under the basic model than under the financial model. During the evaluation period as a whole, total costs under the basic model increased by about 6 percent (\$83 per month alive over control group costs of \$1,330). Total costs under the financial model increased by about 18 percent (\$287 per month alive over control group costs of \$1,592). Government costs increased by somewhat more than total costs—14 percent under the basic model, 28 percent under the financial model. Costs to clients and their families were reduced by 7 percent under both models.

*Channeling reduced unmet needs, increased clients' confidence in receipt of care, and increased their satisfaction with life.* Associated with the increase in formal community services, reported unmet needs for care were reduced by statistically significant but small amounts. Channeling increased reported confidence in receipt of needed care and satisfaction with arrangements for housecleaning, meals, laundry, and shopping. Finally, channeling significantly increased reported satisfaction with life, although this occurred primarily among the group who relied on proxy respondents. Channeling did not affect other measures of quality of life for clients, including morale, social interactions, self-perceived health, and contentment.

*Channeling did not affect measures of client functioning, with the possible exception of physical functioning (ADL) under the financial model.* The basic model does not appear to have affected functioning. The financial model did not affect the number of days restricted to bed or the ability to perform instrumental activities of daily living (IADL). However, significantly fewer members of the treatment group reported performing personal care (ADL) tasks without assistance. This may represent a real deterioration in functioning. But it is more likely an artifact of measurement—treatment group members reported doing less simply because of the high level of assistance provided under this model. Which explanation is correct cannot be determined with the available data.

*Channeling increased informal caregivers' satisfaction with service arrangements and satisfaction with life.* The financial model increased by 27–34

percent the proportion of informal caregivers reporting satisfaction with arrangements for care. (Smaller increases under the basic model were not statistically significant.) The financial model also increased caregivers' confidence in receipt of needed care at six months. Both models increased caregivers' satisfaction with life at six months, and the financial model continued to do so at 12 months. Neither model affected other measures of quality of life for informal caregivers, including emotional, physical, and financial strain due to caregiving; limitations on employment or personal activities; and the number of potentially stressful behavior problems of care recipients.

*Results may have differed between models.* Comparison of the results for the two models suggests that both models achieved similar benefits, but that the basic model did so at lower cost than the financial model. There are two possible qualifications to concluding that benefits were similar. First, some of the benefits are inherently difficult to measure, so there may have been undetectable differences in benefits between the two models. Second, and more importantly, the sites in which the financial model was tested appear to have had more comprehensive case management and formal community services already available than the sites in which the basic model was tested. This may have led to an underestimate of the differences in effects between the two models.

*Channeling's effects were generally similar across sites and subgroups of the population.* There was little evidence that any one site or group of sites was markedly more (or less) successful than the other sites. Nor did channeling effects differ across subgroups defined by characteristics such as disability, living arrangement, Medicaid eligibility, and so on. The one noteworthy exception was the small group in a nursing home at enrollment, for which nursing home use appears to have been reduced. Not surprisingly, nursing home use was much higher among this group (117–119 days during the first year depending on the model) than among the full sample, and the relative reduction was higher (24–30 percent), resulting in a substantially larger reduction in nursing home use (29–35 days).

## CONFIDENCE IN THE RESULTS OF CHANNELING AS FIELDDED

There is, in our judgment, little doubt about the basic conclusions concerning the channeling demonstration as fieldded. Three pieces of evidence increase our confidence in the results.

First, the results were generally consistent across the sites in which each model was tested; thus, the overall results were not dominated by effects in one or two sites, nor were there significant offsetting results in different sites.

Second, changes of any plausible magnitude in the channeling results would not alter the basic conclusion about costs. Reducing costs by substituting community care for nursing home care is extremely difficult for a group with low risk of nursing home placement. A rough comparison of the average costs of community care and nursing home care illustrates the difficulty (see Thornton and Dunstan, 1986, Chapter V). Just to break even, the basic model would have had to reduce average nursing home use to less than half of actual control group use. The financial model, given its larger increase in the cost of community care, could not have broken even at all, because the required reduction in nursing home use would have exceeded total control group use. Any delayed effects of channeling on nursing home use would be unlikely to reverse this basic conclusion. Under a range of assumptions about the effects of channeling after the 18-month observation period, there would have been no cost savings.

Third, the channeling results are consistent with those of other community care demonstrations, which generally found (with one important exception discussed below) relatively low risk of nursing home use among the populations served and insufficient nursing home cost savings to offset the increased costs of expanded case management and community services (Kemper, Applebaum, and Harrigan, 1987).

## GENERALIZABILITY

The findings and conclusions reported here are for channeling as fielded in the ten demonstration sites in 1982-1984. Determining whether the results are generalizable to other interventions, populations, or environments is difficult for any demonstration, and channeling is no exception. Assessment of these issues will, however, assist users of the research in making judgments about its applicability to their particular situation.

## THE INTERVENTION

The channeling intervention itself could be successfully replicated in other settings as a permanent program. The demonstration had some advantages over an ongoing program (commitment of staff to national demonstration goals; special technical assistance; training; and state



and federal management oversight), but it also bore some special costs (pressure to recruit and screen clients and controls quickly for the research sample; the necessity to develop new procedures, management structure, and provider relationships; requirements to maintain and report program data for the research). On balance, although an ongoing program would encounter different problems, we see nothing to suggest that the special nature of the demonstration implies that channeling cannot be replicated elsewhere. Indeed, the demonstration's documented experience in case management, provider relations, and cost controls is a useful guide to practice in any case management program (see Carcagno et al., 1986).

The demonstration tested two variants of a particular approach to long-term care—comprehensive case management combined with (1) limited funding to fill in the gaps in existing funding for community services and (2) substantially expanded coverage and eligibility for community services subject to cost controls. Channeling case management did not encompass acute medical or institutional care (as, for example, a social/health maintenance organization does). Application to channeling was voluntary, in contrast to programs that restrict applicants to those who have passed nursing home preadmission screens. And, of course, channeling did not include vouchers, which allow clients to make their own choices about long-term care services. Thus, channeling is only one of many approaches that incorporate assessment, case management, and some form of financing of community care; the demonstration cannot speak to the effectiveness of case management within other approaches.

#### THE POPULATION SERVED

Channeling was tested with the particular population who applied voluntarily to the channeling projects; they may have been a selected subset of the total eligible population. The channeling projects did not serve all of the eligible population in the sites. Project case loads were less than 0.5 percent of the elderly population in the sites with the largest populations, and 1.1–1.6 percent in the three sites with the smallest populations. For comparison, the total population that would be eligible for channeling was estimated to be about 5 percent of the noninstitutionalized elderly population (Carcagno et al., 1986). Compared to the national eligible population, channeling clients at the time of application were more than twice as likely to have had a hospital stay in the prior two months and almost twice as likely already to be receiving formal in-home care. This suggests that channeling may have

served a selected group who had more needs related to an acute care episode and were more likely to be connected with the existing community care system than the eligible population as a whole.

The channeling results focus attention on the importance of enrolling the target population—those at high risk of nursing home placement—without also enrolling a large population who would remain in the community even without channeling. The channeling population turned out to have relatively low risk of nursing home placement despite state-of-the-art screening criteria and assessment techniques.

The one evaluation that used a randomized design and reached a different conclusion about the substitution of community for institutional care is of special interest in this regard (Blackman et al., 1985). The South Carolina Long-Term Care project served a slightly more disabled population than channeling. Nursing home use among the control group was high (48 percent of controls were in a nursing home after one year), and the demonstration-induced reduction in use was substantial (40 days during the first year after enrollment). The South Carolina project differed from channeling and most of the other community care demonstrations in that it was integrated with the state's nursing home preadmission screen through which it received its clients. Whether because this approach was used to enroll clients or because of some other reason, the South Carolina project appears to have been able to enroll a population at high risk of nursing home placement. It was able to reduce nursing home use enough to offset the public costs of providing case management and expanded community services. Public costs were essentially equal for the treatment and control groups. (Private costs were not analyzed.)

## THE ENVIRONMENT

Establishing whether the availability of nursing homes and community services in the demonstration sites was similar to that of the nation as a whole is important in interpreting the results. In recent years, many states have sought to control nursing home costs by limiting Medicaid nursing home reimbursement rates and disapproving requests for certificates of need for additional nursing home beds. Both policies have restricted supply, making it more difficult to gain admission to a nursing home. This increases the difficulty of substituting community care for nursing home care because the reimbursement and certificate of need policies already have reduced nursing home use.

We asked hospital discharge planners and other knowledgeable

providers at channeling sites how long applicants had to wait for admission to a nursing home. According to these reports, waiting times for skilled beds were short on average for private pay patients (three weeks in basic sites and less than a week in financial sites) but longer for Medicaid patients (18 weeks in basic sites and 24 weeks in financial sites). National data on waiting times were not available for comparison. Although not a perfect indicator of availability, nursing home bed supply data, available for the counties in which channeling operated and for the nation, provide some insight. Basic sites had slightly fewer beds per thousand persons age 65 or older than the nation (50 versus 57); financial model sites had fewer still (43), although if Miami is excluded the average is about that of the basic sites. These data suggest that nursing home beds were probably somewhat less available than in the nation as a whole, but that severe shortages were probably not a major factor affecting channeling outcomes for a majority of clients. (Channeling clients, though poor, generally were not on Medicaid.)

National data on the availability of community care are even more limited. Home health expenditures under Medicare and Medicaid and the proportion of states covering optional services under Medicaid were similar in the demonstration sites and the nation. No data on community care under other programs, such as state home care programs, are readily available. As indicated, we do know that case management approaching channeling in its comprehensiveness was already available on a limited basis in the demonstration sites, and that control group receipt of direct community services was substantial. Given that the demonstration projects applied to participate in the demonstration through a competitive process, the case management and community care systems in the selected sites may have been more developed than in sites that did not apply. The more case management and community services had already become available, the smaller channeling effects were likely to be.

Whether channeling's effects would differ in communities with greater nursing home bed supply and less well developed community care systems cannot be determined from the demonstration. It is important to emphasize, however, that channeling tested the effect of *adding* comprehensive case management and expanded community care to service systems that already provided such services to some of the frail elderly. It was not an evaluation of community care per se—that is, community care compared to its total absence. The channeling results did not address whether programs providing case management and formal community care should be initiated in areas without any such programs, or whether communities that, like the channeling sites,

already have community care programs should reduce their scale or the scope of services offered (see Brown and Phillips, 1986).

## CONCLUSION

Consistent with its original intent, channeling benefited clients and the family and friends who cared for them in several ways: increased in-home care, reduced unmet needs, increased confidence in receipt of care and satisfaction with arrangements for it, and increased satisfaction with life. The increased services did not result in large reductions in informal caregiving. Contrary to its original intent, however, channeling increased costs. The costs of the additional case management and community services were not offset by reductions in the cost of nursing home use. Substantial reductions in nursing home use were not possible because, despite severe disability, clients were not at high risk of nursing home placement. Only a relatively small portion of the population would have used nursing homes even without channeling.

The channeling results are consistent with those of most other community care demonstrations. The only exception that used a randomized evaluation design was the South Carolina Long-Term Care demonstration. Using a mandatory nursing home preadmission screen to identify a population at high risk of nursing home placement, the South Carolina demonstration was able to reduce nursing home use and thereby to break even on public costs—but not to reduce them. This suggests that improved targeting is not likely to result in substantial cost savings.

Expansion of case management and community services beyond what already exists, then, must be justified based not on its ability to reduce costs but on its benefits—increased in-home care, reduced unmet needs, and improved satisfaction with life among clients and informal caregivers.

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